

CLAIMS

What is claimed is:

1 1. A reservoir control assembly for use within a wellbore to selectively open and close off a
2 lower completion portion of a well for removal or placement of an upper completion portion, the
3 assembly comprising:

4 a control valve body with an anchor portion for selectively landing the control valve body
5 into a packer within the wellbore;

6 a fluid flow port disposed within the valve body;

7 a first slidable sleeve member that is moveable between an open position, wherein fluid
8 communication through the port is not blocked by the first sleeve member, and a closed position,
9 wherein fluid communication through the port is blocked by the first sleeve member; and

10 a second slidable sleeve member that is moveable between an open position, wherein fluid
11 communication through the port is not blocked by the second sleeve member, and a closed position,
12 wherein fluid communication through the port is blocked by the second sleeve member.

1 2. The reservoir control assembly of claim 1 wherein the first sleeve is moved between the open
2 and closed positions by a stinger assembly.

1 3. The reservoir control assembly of claim 1 wherein the valve body is separable.

1 4. The reservoir control assembly of claim 1 further comprising an outer shroud for containing
2 flow of production fluid.

5. The reservoir control assembly of claim 4 further comprising a frangible burst member within the shroud for selectively providing a secondary fluid flow path.

6. The reservoir control assembly of claim 1 wherein one of said slidable sleeve members is moved to its open position by increase of fluid pressure within an annulus radially surrounding the reservoir control assembly.

7. The reservoir control assembly of claim 1 further comprising a plug within the valve body to block axial fluid flow through the valve body.

8. A reservoir completion assembly for selective production of production fluid from a lower section of a wellbore, the system comprising:

a lower completion section formed of tubing string and a packer device for securing the lower completion section within the wellbore;

an upper completion section formed of tubing string and having:

an anchor device for selectively latching into said packer device; and

a reservoir control valve for controlling flow of fluid from the lower completion, the

reservoir control valve comprising:

a) a control valve body with an anchor portion for selectively landing the control valve body into a packer within the wellbore;

b) a fluid flow port disposed within the valve body;

c) a first slidable sleeve member that is moveable between an open position, wherein fluid communication through the port is not blocked by the first sleeve member, and a

14 closed position, wherein fluid communication through the port is blocked by the first sleeve member;
15 and
16 d) a second slidable sleeve member that is moveable between an open position,
17 wherein fluid communication through the port is not blocked by the second sleeve member, and a
18 closed position, wherein fluid communication through the port is blocked by the second sleeve
19 member.

1 9. The reservoir completion assembly of claim 8 further comprising a fluid pump incorporated
2 within the upper completion section for assisting flow of fluid from the lower completion section
3 toward a surface of the wellbore.

1 10. The reservoir completion assembly of claim 8 wherein the first sleeve is moved between the
2 open and closed positions by a stinger assembly.

1 11. The reservoir completion assembly of claim 8 wherein the valve body is separable.

1 12. The reservoir completion assembly of claim 8 further comprising an outer shroud for
2 containing flow of production fluid.

1 13. The reservoir completion assembly of claim 8 further comprising a plug within the valve
2 body to block axial fluid flow through the valve body.

1 14. The reservoir completion assembly of claim 8 wherein one of said slidable sleeve members is
2 moved to its open position by increase of fluid pressure within an annulus radially surrounding the
3 reservoir control valve.

1 15. A method of selectively accessing a lower completion portion of a well comprising the steps
2 of:

3 landing an upper completion section having a reservoir control valve assembly onto the lower
4 completion portion within the wellbore;

5 moving a first sliding sleeve member upon the reservoir control valve assembly from a closed
6 position to an open position to unblock a fluid port in the valve assembly;

7 moving a second sliding sleeve member upon the reservoir control valve assembly from a
8 closed position to an open position to unblock a fluid port in the valve assembly; and

9 flowing production fluid from the lower completion portion toward a surface of the well.

1 16. The method of claim 15 further comprising the step of closing off flow of production fluid
2 from the lower completion portion by moving one of said sliding sleeves to block said fluid port.

1 17. The method of claim 16 further comprising the step of separating the upper completion
2 section from the lower completion section after blocking of said fluid port.

1 18. The method of claim 15 wherein the step of moving the first sliding sleeve assembly further
2 comprises increasing annulus pressure within the wellbore to exert fluid pressure upon a piston face
3 of said sliding sleeve and cause it to move.

1 19. The method of claim 15 wherein the second sliding sleeve is moved by a urging of a stinger
2 assembly.

1 20. The method of claim 15 further comprising the step of operating a fluid pump to assist flow
2 of production fluid from the wellbore.